

DEPARTMENT OF THE ARMY  
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WRAMC Pamphlet  
No. 40-67

22 July 2002

Medical Services  
**MEDICATION ADMINISTRATION BY THE IV PUSH ROUTE**

**1. PURPOSE.** The purpose of this pamphlet is to provide safeguards for the administration on the Intravenous administration of medications which can be given IV Push.

**2. Applicability.** This guidance is applicable to all organizational elements of the Walter Reed Health Care System (WRHCS) to include outlying clinics.

**3. References.**

- a. AR 40-3, Medical, Dental, and Veterinary Care.
- b. Manufacture's package inserts (various).

**4. Responsibilities.**

- a. When ordering an IV push medication, providers must take into account the minimum administration requirements and the monitoring capabilities of specific nursing locations.
- b. If a patient is located in a nursing location that is not able to meet the prescribed level of monitoring, the following options are available:
  - (1) Move the patient to a monitored area.
  - (2) Consider alternative routes (i.e. IV piggy-back) or using a syringe pump.
  - (3) If neither of these options is appropriate, the situation will be referred to the appropriate nursing supervisor. That supervisor will evaluate the merits of redistributing the necessary personnel and equipment to safely administer the IV push medication to the patient.
- c. Upon request, the Department of Pharmacy will furnish information regarding the safe administration of IV medications.

**5. Policies.** Patient safety dictates that medications be administered in an appropriate environment by trained individuals functioning within the scope of their practice.

**6. Procedures.** Annex A provides a concise guide to the medications that may be administered by the IV push route.

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\* This pamphlet supersedes WRAMC Pamphlet 40-67, dated 1 Sep 1999.

## ANNEX A

## IV PUSH Administration Guideline

Generic Name	Brand Name	Use/Therapeutic Category	Rate of Administration (IV PUSH)	Person to Administer	Unit/Area	Cautions & Adverse Reactions
Adenosine	Adencocard®	Anitarrhythmic	Rapid, 1-2 Seconds	RN, MD	Monitored++ Emergency Situations# Code**	Do not confuse with Adenosine Phosphate.
Ara-C	Cytarabine®	Antineoplastic Agent Antimetabolite	2-4 minutes, IC	RN, MD	Pediatric H/O clinic & ward	Extravasation, No Intrathecal
Atrophine Sulfate		Anticholinergic Agent	Rapid	RN, MD	Code** All wards	Tachycardia, Hypertension
Bleomycin	Blenoxane®	Antineoplastic Agent Antibiotic	1-2 minutes	RN, MD	Pediatric H/O clinic & ward	Anaphalotoid reactions, frequently premedicated with acetaminophen and diphenhydramine
Bretylum	Bretylol®	Antiarrhythmic Agent, Second Line Agent for Ventricular Tachycardia (VT) and Fibrillation (VF)	One minute IV push. Do not exceed 30 mg/kg/day	RN, MD	All wards Code**	Arrythmia, Hypertension, Hypotension refractory to epinephrine (use dopamine), nausea, vomiting
Calcium Chloride		Calcium Salt, Electrolyte Supplement, Second Line Agent for Cardiac resuscitation	100 mg/min	RN, MD	Emergency Situations# Monitored++ Code**	Hypotension Do not infuse in same line with phosphate containing solutions.
Calcium Gluconate	Kalciate®	Calcium salt, Electrolyte Supplement	280 mg/min (2 ml / min)	RN, MD	All wards	Hypotension Do not infuse in same line with phosphate containing solutions.
Dactinomycin	Comsegen®	Antineoblastic Agent Antibiotic	5-10 minutes	RN, MD	Pediatric H/O clinic & ward	Extravasation
Daunorubicin	Cerubidine®	Antineoplastic Agent Anthracycline	3-5 minutes	RN, MD	Pediatric H/O clinic & ward	Extravasation
Dexamethasone	Decadron ®	Corticosteroid, Glucocorticoid, Antiemetic	Slow IV push over 1 minute	RN, MD	All wards	
Diazepam	Valium®	Benzodiazepine, Sedative, Status epilepticus Antianxiolytic	Slow IV push, 5 mg/min	MD, CRNA	Monitored++ No Pediatrics	Hypotension, Respiratory Depression, Change in mental status

++ Monitored Beds refers to critical care units or units capable of providing respiratory and cardiac monitoring.

# In emergency situations authorized person may administer on ward. In some cases, authorized personnel may include RN.

\*\* Drug should be administered by CODE TEAM.

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Digoxin	Lanoxin®	Antiarrhythmic, Cardiac Glycoside	1-5 min	RN, MD	Monitored++ No Pediatrics Code**	Hyperkalemia, Bradycardia
Dihydroergotamine	D.H.E. 45®	Serotonin Agonist Migraine & Cluster Headache treatment	Moderate, over 10-20 seconds 0.5-2.0mg up to Q8 hours	RN, MD	Wards	Not for use in patients with Ischemic or vasospastic arterial disease
Diltiazem	Cardizem®	Calcium Channel Blocker	Dose/2min	RN, MD	Monitored++	Hypotension, Bradycardia
Diphenhydramine	Benadryl®	Antihistamine, Hypersensitivity Reactions	25 mg/min	RN, MD	All wards Code**	Change in mental status, Drowsiness
Doxorubicin	Adriamycin®	Antineoplastic Agent Anthracycline	5-10 minutes	RN, MD	Pediatric H/O clinic & ward	Extravasation
Droperidol	Inapsine®	Antiemetic, Antipsychotic	Over 2-5 minutes	RN, MD	Monitored++	Hypotension, Tachycardia, Extrapyramidal Symptoms
Epinephrine	Adrenalin®	Cardiac Arrest, Anaphylactic Reactions, Adrenergic Agonist Agent	Rapid, 5-10 seconds	RN, MD	All wards, Emergency Situations# Code**	Tachyarrhythmias Hypertension
Fentanyl	Duragesic® Sublimaze®	Analgesic, General anesthetic	50-100mcg over 3-5 minutes	MD, CRNA	Monitored++	Respiratory depression
Flumazenil	Romazicon®	Antidote, Benzodiazepine Antagonist	Rapid, 15-30 seconds	RN, MD	All wards, Emergency Situations#	May precipitate withdrawal in unrecognized benzodiazepine dependent patients. Does not reverse respiratory depression.
Fluorouracil	5FU®	Antineoplastic Agent	5-10 minutes	RN, MD	Pediatric H/O clinic & ward	Do not refrigerate
Fosphenytoin	Cerebyx®	Anticonvulsant	100-150 mg/min	RN, MD	Monitored++	1.5 mg of fosphenytoin = 1 mg of phenytoin sodium.
Furosemide	Lasix®	Diuretic	Slow IV push, 20 mg/min	RN, MD	All wards Code**	Hypotension, Electrolyte imbalance
Glycopyrrolate	Robinul®	Anticholinergic, Antispasmodic	IV push, 0.2 mg/min	RN, MD	All wards	Blurred vision, Tachycardia, Absent bowel sounds

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Haloperidol	Haldol®	Antipsychotic, Effective in alcohol withdrawal at low doses	0.5-2 mg over 1 or 2 min	RN, MD	All wards	<b>The deconate form <u>CANNOT</u> be given IV.</b> Monitor for hypotension. Adverse effects include: extrapyramidal reactions, dystonic reactions, seizures, and paradoxical anxiety.
Heparin	Hep-Lock®	Anticoagulant	IV push over 1 minute	RN, MD	All wards	Bleeding
Hydrocortisone	Solu-cortef®	Anti-inflammatory, Corticosteroid, Glucocorticoid	IV push over 1 minute	RN, MD	All wards	
Hydromorphone	Dilaudid®	Analgesic, Narcotic	IV push 0.5 mg/minute	RN, MD	All wards	CNS Depression, Respiratory Depression
Idarubicin	Idamycin®	Antineoplastic Agent Antibiotic, Antracycline	3-5 minutes	RN, MD	H/O ward & clinic	Extravasation
Ketamine	Ketalar®	General Anesthetic	0.5 mg / kg / minute, do not exceed 50mg/ml conc.	MD, CRNA	Monitored++	
Ketorolac	Toradol®	Analgesic, NSAID	Dose/15 sec	RN, MD	All wards	For short term use only (less than 5 days). Renal Impairment
Labetalol	Normodyne®	Beta-Adrenergic Blocker	10-20 mg over 2 minutes	RN, MD	Monitored++	Hypotension, Bradycardia, AV Block, Bronchospasm
Leucovorin	Wellcovorin®	Antidote for Methotrexate, Folic Acid Antagonist	IV push, do not exceed 160 mg/minute	RN, MD	All wards	Do not use intrathecally, intraventricularly
Lorazepam	Ativan®	Benzodiazepine, Sedative, Anticonvulsant, Antianxiolytic	IV push, less than 2 mg/min	RN, MD	All wards	Hypotension, Respiratory Depression, Change in mental status
Mannitol	Osmitrol®	Diuretic, Osmotic	IV push over 3-5 minutes	RN, MD	All wards	Hypotension, Electrolyte Imbalance
Meperidine	Demerol®	Analgesic, Narcotic	IV push, 25 mg/min	RN, MD	All wards	CNS Depression, Respiratory Depression, Hypotension

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Methotrexate	MTX®	Antineoplastic Agent Antimetabolite	5-10 minutes	RN, MD	Pediatric H/O clinic & ward	Also given Intrathecal
Methylprednisolone	Solumedrol®	Anti-inflammatory, Corticosteroid, Glucocorticoid	IV push over 1 minute	RN, MD	All wards	
Metoprolol	Lopressor®	Beta-Adrenergic Blocker	2.5-20 mg over 2 minutes	RN, MD	Monitored++ Code**	Hypotension, Bradycardia, AV Block, Bronchospasm. <u>May be administered as piggyback in unmonitored wards if oral route is not possible; admin over 30 mins.</u> Piggyback is stable for 24 hours.
Midazolam	Versed®	Benzodiazepine, Hypnotic, Sedative	0.5-2.5 mg/3 min	RN, MD	Monitored++	Respiratory Depression, Hypotension, Change in mental Status
Mitomycin	Mutamycin®	Antineoplastic Agent, Antibiotic	5-10 minutes	RN, MD	Pediatric H/O Clinic & ward	Extravasation
Morphine	Duramorph®	Analgesic, Narcotic	IV push, 1-3 mg/min	RN, MD	All wards	CNS Depression, Respiratory Depression, Hypotension
Naloxone	Narcan®	Antidote for Narcotic Agonist	IV push, 1-2 mg/min	RN, MD	All wards Code**	Hypertension
Norepinephrine	Levophed®	Adrenergic Agonist, Sympathomimetic	2-40 mcg/min	RN, MD	Monitored++ Emergency Situations# Code**	Do not infuse in same line containing sodium bicarbonate. Hypertension, Arrhythmias
Phenobarbital	Luminal®	Anticonvulsant, Barbiturate, Hypnotic, Sedative	Less than 60 mg/min	RN, MD	All wards	Hypotension, Respiratory Depression, Extravasation
Phenytoin	Dilantin®	Anticonvulsant	25-50 mg/min	RN, MD	Monitored++ Code**	Change in mental status change, Hypotension, Respiratory Depression

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Phytonadione (Vit K)	Aquamephyton®	Hypoprothrombinemia	1 mg/min	RN, MD	Monitored++	Monitor prothrombin time. <b>IV administration should not be used</b> if other routes are available.
Procainamide	Pronestyl®	Antiarrhythmic	25-50 mg/min	RN, MD	Monitored++ Emergency Situations# Code**	Seizures, Arrhythmia, Change in Mental Status
Promethazine	Phenergan®	Anitmetic, Antihistamine	Less than 25 mg/min	RN, MD	All wards	Hypotension
Sodium Bicarbonate	Neut®	Electrolyte Supplement, Alkalinizing Agent	IV push over 1-3 minutes	RN, MD	All wards, Emergency Situations# Code**	Extravasation, Electrolyte Imbalance, Seizures
Thiotepa	Thioplex®	Antineoplastic Agent, Alkaloid	5-10 minutes	RN, MD	Pediatric H/O clinic & ward	
Verapamil	Calan®	Calcium Channel Blocker, Antiarrhythmic	2.5 mg/2-3 min	RN, MD	Monitored++ Code**	Hypotension, Bradycardia
Vincristine	Oncovin® Vincasar®	Antineoplastic Agent, Vinca Alkaloid	1-2 minutes	RN, MD	Pediatric H/O clinic & ward	Extravasation, No Intrathecal
Vinblastine	Velban® Velsar®	Antineoplastic Agent, Vinca Alkaloid	2-3 minutes	RN, MD	Pediatric H/O clinic & ward	Extravasation, No Intrathecal
Vinorelbine	Navelbine®	Antineoplastic Agent, Vinca Alkaloid	5-10 minutes	RN, MD	Pediatric H/O clinic & ward	Extravasation, No Intrathecal

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**The proponent agency of this publication is the Department of Pharmacy. Users are invited to submit comments and suggested improvements on a DA Form 2028 (Recommended Changes to Publications and Blank Forms) to the Commander, Walter Reed Army Medical Center, ATTN: MCHL-RX, 6900 Georgia Avenue, NW, Washington, DC 20307-5001.**

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